

**Meridian Street Bridge
State Route 27 Over the Salamonie River
Portland
Jay County
Indiana**

HAER No. IN-93

HAER
IND
38-PORT,
1-

**PHOTOGRAPHS
WRITTEN HISTORICAL AND DESCRIPTIVE DATA**

**Historic American Engineering Record
National Park Service
Great Lakes System Support Office
Midwest Field Area
Department of the Interior
1709 Jackson St.
Omaha, Nebraska 46102**

**HISTORIC AMERICAN ENGINEERING RECORD
MERIDIAN STREET BRIDGE**

HAER No. IN-93

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Location: Spanning the Salamonie River on State Road 27 in the City of Portland, Indiana, approximately 0.11 mile south of State Road 26, Jay County, Indiana

UTM: 16.671530.4477300

Quad: Portland, Indiana

Date of Construction: 1914

Present Owner: State of Indiana

Present Use: Vehicular and Pedestrian Traffic

Significance: The Meridian Street Bridge is the only reinforced concrete thru arch bridge remaining in Indiana.

Project Information: This documentation was undertaken on March 4, 1996, in accordance with the Memorandum of Agreement by the Indiana Department of Transportation and the Federal Highway Administration as a mitigative measure prior to the rehabilitation and reconstruction of the bridge.

Todd J. Davis
BUTLER, FAIRMAN and SEUFERT, INC.
9405 Delegates Row
Indianapolis, IN 46240

The Meridian Street Bridge spans the Salamonie River which flows through the central portion of Jay County in an east to west direction. Riparian woods and agricultural land borders the majority of this waterway throughout the county. However, the Meridian Street Bridge is located within the city limits of Portland, Indiana, on the south side of the downtown area and is surrounded by commercial businesses to the north and single family residences to the south.

The Meridian Street Bridge is a single span reinforced concrete through arch. It was built in 1914 by I. E. Smith of Richmond, Indiana. The bridge is seated upon vertical concrete abutments. The superstructure is comprised of two arch rings on either side of the roadway, with the concrete deck and floor beams suspended from the arch ring by rectangular reinforced concrete verticals at 10 foot centers. The bridge itself is 112 feet long with a clear roadway width of 29 feet 2 inches and has 10 foot wide sidewalks on both sides. In addition, there are lamp posts and flower boxes mounted on the concrete end posts of all four corners of the bridge.

There is an existing bridge plaque on the northeast concrete end post that commemorates the restoration of the lighting on the bridge. The plaque reads as follows:

Restoration of the
lighting on this bridge
was dedicated on May
1, 1953 in Memory of

Lydia Naas Raunecker
and
Richard H. Raunecker

The only available recreational activity at this historic property is sightseeing (looking at and away from the bridge). No historic photographs of the bridge were found.

The City of Portland became the county seat for Jay County and incorporated in 1836. Early commerce was limited to basic tools, dry goods, and staples. Farm produce gradually increased as a mainstay of commerce for the city and the county. First, horse drawn machinery, and then finally around 1910, mechanization swelled the reciprocal trade in the area. Blacksmithing, carpentry, and various metal trades increased with new techniques of farming, grain storage, and marketing. The railroad system installed in the late 1800's and early 1900's gave Portland a growth impetus. With the addition of the railroad, a scattering of small industrial businesses flourished in the Portland area. Due to the agrarian back drop, Portland has maintained a stable population growth for three generations. The city has never been a "boom town" nor has it ever lapsed into the danger of being a "ghost town".

Portland was unadvisedly located on low swampy ground to the north of the Salamonie River instead of the higher ground to the south. Extensive filling, ditching and river redredging have not entirely alleviated the danger and inconvenience of spring flooding. The City and County recognized the importance of improving farm to market routes of travel and realized that county residents located south of Portland would have difficulty crossing the Salamonie River in the spring. A metal arch thru bridge was constructed in 1873 and was the first steel bridge ever erected in the county. The bridge was

constructed on the existing Main Street of Portland as this was the primary commercial area located in the City. As commercial activities continued to grow, along with the development of the automobile, City officials understood that the existing steel bridge would be unable to handle the larger weight loads crossing the bridge. The existing concrete Meridian Street Bridge replaced the steel structure in 1914.

Events leading to the construction of the Meridian Street Bridge were discovered in minutes from Board of Commissioners meetings in 1914 and newspaper articles from the Commercial-Review (a Portland, Indiana newspaper) in 1913-1914. The bridge was designed by Mr. Otto O. Clayton, the Portland City Engineer, as part of a civic improvement project in 1913. On December 2, 1913, the members of the Portland City Council met with the Jay County Commissioners to discuss matters pertaining to the construction of the bridge over the Salamonie River on south Meridian Street. The Commissioners had asked and expected the City to take care of the expense of building the sidewalks on the outside of the bridge. Both the Commissioners and the Council agreed that it was right for the City to pay for the walks. The Commissioners then decided to receive bids for the bridge and sidewalks.

On February 3, 1914, an engineer from Cincinnati and Mr. Clayton were before the County Commissioners offering suggestions as to the building of the bridge. The engineer stated that a concrete bridge could be built that would give more waterway opening than a steel bridge, and that the concrete bridge would be much more substantial than a steel bridge. Nothing definite was done on the matter, but a set of plans for a concrete bridge would be submitted to the Commissioners in the next few weeks.

The matter of the bridge came up again in the March 3, 1914, Commissioners meeting when the Commissioners adopted a concrete structure for the proposed bridge. Two plans were submitted. The first plan was of the regular type of concrete bridge with the arch beneath the roadway. The second plan had the arch above the roadway, similar to the existing steel bridge over the river. The merits of both bridges were discussed and the point in question was the waterway opening under the bridge. The Commissioners wanted to build a bridge that would give at least the same amount of waterway opening that presently existed with the steel bridge. It was believed that the inverted arch would give the best results. The estimated cost of this type of a bridge was \$12,000, of which the County would pay \$11,000 and the City would pay \$1,000.

On June 18, 1914, Commissioners H. J. Roby, C. P. Davis, and Elmer Smith were in session for the purpose of receiving bids for the construction of the new concrete bridge on South Meridian Street. Bids were also received for the removal and erection of the existing steel bridge which would be sent to Wabash Township for reassembly. Five bidders were present and presented the following bids for the new concrete bridge: Reed and Reed, Michigan City, \$10,781; Burk Construction Company, New Castle, \$12,490; I. E. Smith, Richmond, \$10,240; Greenfield Bridge and Sewer Company, Greenfield, \$12,000, and Daniel Luten of the National Concrete Bridge Company, Indianapolis, \$9,840. The bids were then taken under advisement by the County Commissioners. After a careful examination and consideration of the foregoing bids, the Commissioners honored "The Clayton Plan" and awarded the bridge construction contract to I. E. Smith of Richmond, Indiana.

Work on the new bridge began on July 29, 1914. The contractor indicated that the bridge would be completed by November 1, and that they intended to rush the work with as much speed as possible. A

temporary foot bridge was installed for pedestrians to cross the river during the bridge construction activities.

The framework for the supports was a tedious proposition because the framework would have to bear the entire weight of the bridge and had to be built solidly and securely. Trenches were dug in the bottom of the river and filled with concrete after which heavy poles were erected. The support for the framework was then structured on these poles. Thousands of feet of lumber were used in building the framework and the forms for the floor of the bridge. The forms had to be absolutely perfect in their dimensions and perfectly constructed.

After the framework and forms were all in place, the steel reinforcing was prepared and installed. This involved the cutting and bending of the steel to the proper lengths and angles, then placing the steel in the correct position inside the forms. There was approximately 52 tons of steel used in the bridge, and of this, 42 tons was used in the floor.

By October 13, 1914, the bridge floor was ready for the concrete to be poured into the forms. A large concrete mixer poured the concrete for the floor and did not stop operating until 40 hours later when the last of the forms was filled with concrete. The floor of the bridge was one solid mass of concrete, thus it was important to complete the floor pouring as fast as possible. Once the floor was done, the bridge had to stand ten days before any weight was placed on it. Construction then began on the forms for the concrete arches.

The arches required specially built and constructed forms and took approximately two weeks to build. A large amount of timber was also needed for the forms of the arches. Each arch was to stand 13 feet high in the center and would be approximately three feet square. Again, the steel had to be cut, bent, and placed in the forms before the concrete could be poured. Inclines were built to the top of the arches so that the concrete could be taken to the top and poured into the forms. The last of the concrete was placed in the forms for the arches on November 12, 1914.

The next step in the construction of the bridge was to erect the forms for the posts which would hold the fence and railing on the outside of the sidewalks. Once the concrete was poured for these posts, the concrete work on the bridge was complete. The bridge then had to stand for a period of 4 to 6 weeks before it would be opened for travel. This was done to give sufficient time for the concrete to harden.

The next two weeks were spent removing the forms and rubbing the arches and posts with rubbing compounds to make the concrete smooth and give it a lighter color. Bush hammers were used on the arches to give them the appearance of stone. The last of the frames and supports under the bridge were removed by December 4, 1914. The bridge was opened for use within the next couple of days.

The bridge was under construction for a period of approximately five months. Being one of the first bridges of this type and design, the bridge had taken more time and study to build than other types of bridges built during this time period. The contractor used more material than the plans and specifications called for in order to be doubly sure that the bridge would carry the required weight and load. The best washed gravel had been used throughout and thousands of feet of lumber and framing timber were used in making the forms and supports. So solid were the forms and foundations made that when over 700

tons of weight were placed on the forms they settled less than a quarter of an inch. It had been expected that the forms would settle at least an inch.

The Wayne County Historical Society, the Indiana State Library, and the Indiana Historical Society were consulted for information on I. E. Smith and his company. However, no information on him or his company could be found.

Although the bridge is located on U. S. Road 27, it is known locally as the Meridian Street Bridge. An inventory numbering system was later used by the state for bridges owned by the Indiana Department of Transportation. The inventory number for the Meridian Street Bridge is 27-38-6182A.

No records were found which described any special conditions or technology in the construction of the Meridian Street Bridge. Machinery and tools were probably similar to those used by other bridge manufacturers of that time.

No significant events or persons are known to be connected with this bridge. The bridge was constructed as part of a civic improvement effort which included a number of new sewer lines, electric street lights in the city center, and brick paving and sidewalks for Meridian Street. Jay County was also planning the construction of a new courthouse.

The bridge, by virtue of its engineering significance, warrants individual inclusion on the National Register of Historic Places as determined by the Indiana State Historic Preservation Officer. It is also considered to be a contributing resource within the Portland Commercial Historic District. The Portland Commercial Historic District is considered eligible for inclusion on the National Register of Historic Places due to its architectural and historical significance. The buildings, which are predominantly Italianate and Revival architectural styles, reflect the popular design movements of the late nineteenth century. The commercial district is also significant historically as an example of a small town that prospered greatly with the introduction of the railroad. The Meridian Street Bridge, which is located on the south edge of the City, provides the main point of access to the commercial district from the south.

Local and regional economic and social conditions were not significantly affected by the construction of any one bridge in this part of the county. However, collectively, the bridges spanning the Salamonie River and other nearby waterways provided shorter travel distances, thus, decreasing trip time and costs for travelers, farmers, and motorists, in the central and southern portion of Jay County.

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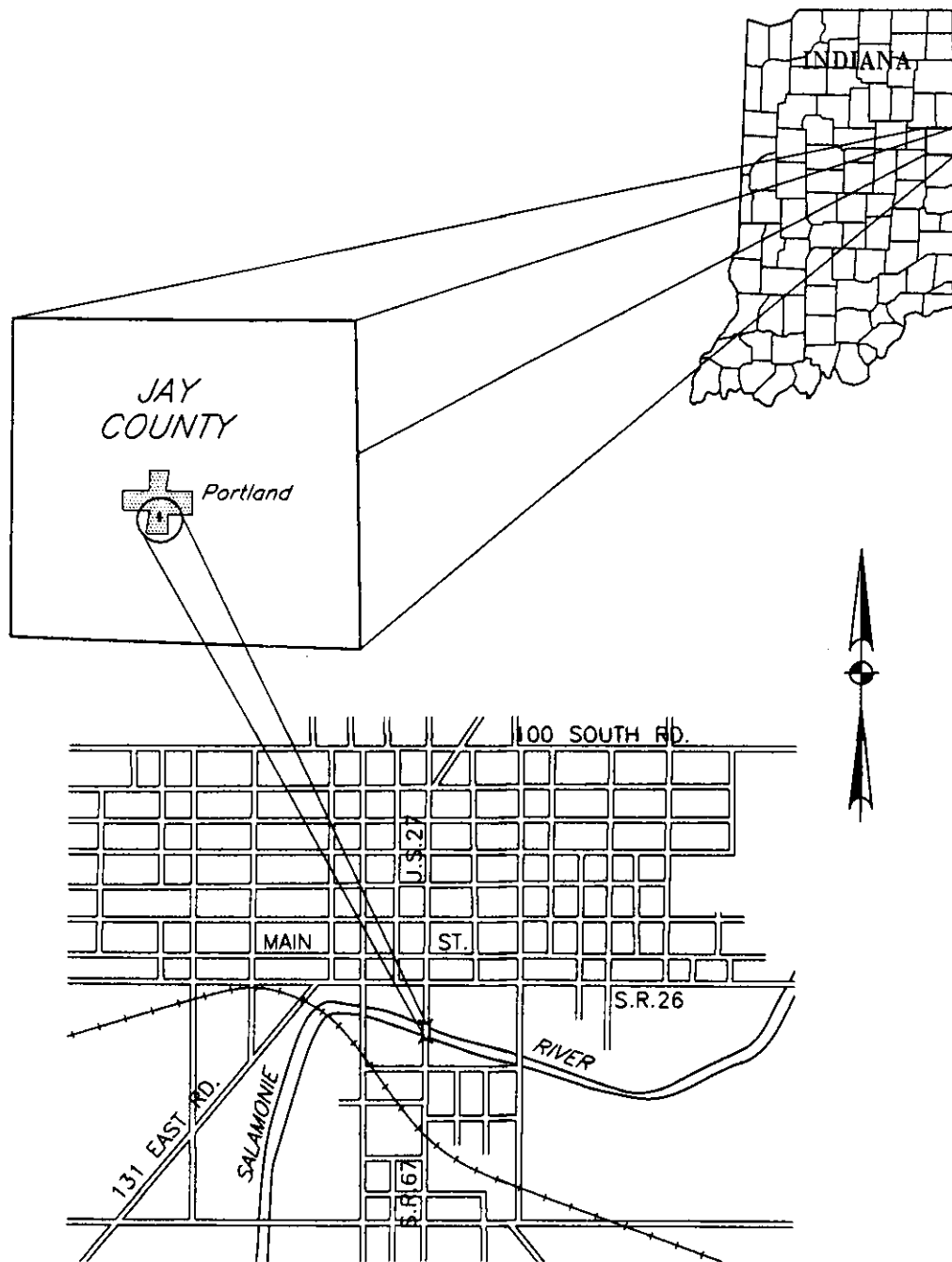
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MERIDIAN STREET BRIDGE
HAER NO. IN-93 (PAGE 7)



SITE
LOCATION MAP

Scale: 1"=2000'

CARRIAGE HOUSE & STABLE
120 Elm Street
Madison
Jefferson Co.
Indiana

HAER No. IN-76

HAER
IND
39-MAD,
49-

REDUCED COPIES OF MEASURED DRAWINGS

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of the Interior
Cultural Resources
1849 C Street, N.W., Room NC300
Washington, D.C. 20240